

What I claim as my invention is:

1. An aircraft with a main body, a primary lifting  
mechanism and a secondary lifting mechanism,  
which main body has a forward end and an aft end,  
5 with the primary lifting mechanism and the secondary  
lifting mechanism connected to the main body of  
the aircraft in tandem order, and with the aircraft  
able to achieve flight by means of upward  
forces exerted on the main body of the aircraft  
10 by the primary lifting mechanism and the  
secondary lifting mechanism while the primary  
lifting mechanism and the secondary lifting  
mechanism are connected to the main  
body of the aircraft in tandem order,  
15 and which primary lifting mechanism comprises a  
powerplant as a means for providing downwardly  
extending thrust to the aircraft, and which secondary  
lifting mechanism comprises a powerplant as the means  
for providing downwardly extending thrust to the aircraft,  
20 and which primary lifting mechanism is connected  
to the main body of the aircraft by a tilt  
enabling joint such that during flight of the  
aircraft the primary lifting mechanism can be

tilted in a plurality of directions and angles  
relative to the main body of the aircraft, in  
a controlled manner, and such that the primary  
lifting mechanism can be tilted in lateral  
5 directions relative to the main body of the  
aircraft during flight of the aircraft,  
and such that a direction of travel of the  
aircraft during flight can be altered by  
altering the  
10 lateral direction or angle of tilt of the  
primary lifting mechanism relative to the  
main body of the aircraft, and which said  
tilt enabling joint is a primary tilt  
enabling joint, with the primary lifting  
15 mechanism able to exert an upward force on  
the forward end of the main body of the  
aircraft through the primary tilt enabling  
joint, and which secondary lifting  
mechanism is connected to the main body of  
20 the aircraft by an additional tilt enabling  
joint, which said additional tilt enabling  
joint is a secondary tilt enabling joint, and  
which said secondary lifting mechanism is

connected to the main body of the aircraft by  
the secondary tilt enabling joint such that  
during flight of the aircraft the secondary  
lifting mechanism can be tilted in a plurality of  
5 directions and angles relative to the main body  
of the aircraft, in a controlled manner,  
and such that the secondary lifting mechanism  
can be tilted in lateral directions relative  
to the main body during flight of the aircraft,  
10 and such that  
a direction of travel of the aircraft during  
flight can be altered by altering the  
lateral direction or angle of tilt of the  
secondary lifting mechanism relative to the  
15 main body, and which secondary tilt enabling  
joint is such that the secondary lifting mechanism  
can be tilted in a controlled  
manner in a lateral direction with respect to  
the main body of the aircraft during flight of  
20 the aircraft that is opposite to a lateral  
direction that the primary lifting mechanism  
can be tilted in with respect to the main body  
of the aircraft by means of the primary tilt  
enabling joint during flight of the aircraft,  
25 and which secondary lifting mechanism is able  
to exert an upward force on the aft end of the

main body of the aircraft through the secondary tilt enabling joint, with the primary tilt enabling joint and the secondary tilt enabling joint connected to the main body of the aircraft, and with the aircraft  
5 able to achieve flight by means of an upward force exerted on the main body of the aircraft by the primary lifting mechanism through the primary tilt enabling joint and an upward force exerted on the main body of the aircraft  
10 by the secondary lifting mechanism through the secondary tilt enabling joint while the primary lifting mechanism and the secondary lifting mechanism are maintained in tandem order, and with controlled lateral tilting of the  
15 primary lifting mechanism and the secondary lifting mechanism able to occur during flight while the primary lifting mechanism and the secondary lifting mechanism are maintained in tandem order.

2. An aircraft with a main body, a primary lifting  
20 mechanism and a secondary lifting mechanism, which main body has a forward end and an aft end, with the primary lifting mechanism and the secondary lifting mechanism connected to the main body of the aircraft in tandem order, and with the aircraft  
25 able to achieve flight by means of upward

forces exerted on the main body of the aircraft  
by the primary lifting mechanism and the  
secondary lifting mechanism while the primary  
lifting mechanism and the secondary lifting  
5 mechanism are connected to the main in  
body of the aircraft in tandem order,  
and which primary lifting mechanism comprises  
a rotor, an engine assembly, and a plurality of  
blades, with the said blades connected to the  
10 rotor, and which said engine assembly is able  
to rotate the said rotor, with the blades connected  
to the rotor such that when the rotor is rotated by  
the said engine assembly air can be forced in a  
downward direction by means of the blades rotating  
15 around the rotor, with the primary lifting  
mechanism able to exert an upward force on the  
forward end of the main body of the aircraft by  
forcing air in a downward direction by way of the  
blades rotating around the rotor,  
20 and the secondary lifting mechanism comprises  
a rotor, an engine assembly, and a plurality of  
blades, with the blades of the secondary lifting  
mechanism connected to the rotor of the secondary  
lifting mechanism, and which engine assembly of  
25 the secondary lifting mechanism is able to rotate

the rotor of the secondary lifting mechanism,  
with the blades of the secondary lifting mechanism  
connected to the rotor of the secondary lifting  
mechanism such that when the rotor of the secondary  
5 lifting mechanism is rotated by the engine assembly  
of the secondary lifting mechanism air can be forced  
in a downward direction by means of the blades of the  
secondary lifting mechanism rotating around the rotor  
of the secondary lifting mechanism, with the secondary  
10 lifting mechanism able to exert an upward force on  
the aft end of the main body of the aircraft by  
forcing air in a downward direction by way of the  
blades of the secondary lifting mechanism rotating  
around the rotor of the secondary lifting mechanism,

15 and which primary lifting mechanism is connected  
to the main body of the aircraft by a tilt  
enabling joint such that during flight of the  
aircraft the primary lifting mechanism can be  
tilted in a plurality of directions and angles  
20 relative to the main body of the aircraft, in  
a controlled manner, and such that the primary  
lifting mechanism can be tilted in lateral  
directions relative to the main body of the  
aircraft during flight of the aircraft,  
25 and such that a direction of travel of the

aircraft during flight can be altered by altering the lateral direction or angle of tilt of the primary lifting mechanism relative to the

5 main body of the aircraft, and which said tilt enabling joint is a primary tilt enabling joint, with the primary lifting mechanism able to exert an upward force on the forward end of the main body of the

10 aircraft through the primary tilt enabling joint, and which secondary lifting mechanism is connected to the main body of the aircraft by an additional tilt enabling joint, which said additional tilt enabling

15 joint is a secondary tilt enabling joint, and which said secondary lifting mechanism is connected to the main body of the aircraft by the secondary tilt enabling joint such that during flight of the aircraft the secondary

20 lifting mechanism can be tilted in a plurality of directions and angles relative to the main body of the aircraft, in a controlled manner, and such that the secondary lifting mechanism can be tilted in lateral directions relative

25 to the main body during flight of the aircraft,

and such that a direction of travel of the aircraft during flight can be altered by altering the lateral direction or angle of tilt of the secondary lifting mechanism relative to the main body, and which secondary tilt enabling joint is such that the secondary lifting mechanism can be tilted in a controlled manner in a lateral direction with respect to the main body of the aircraft during flight of the aircraft that is opposite to a lateral direction that the primary lifting mechanism can be tilted in with respect to the main body of the aircraft by means of the primary tilt enabling joint during flight of the aircraft, and which secondary lifting mechanism is able to exert an upward force on the aft end of the main body of the aircraft through the secondary tilt enabling joint, with the primary tilt enabling joint and the secondary tilt enabling joint connected to the main body of the aircraft, and with the aircraft able to achieve flight by means of an upward force exerted on the main body of the aircraft by the primary lifting mechanism through the primary tilt enabling joint and an upward force exerted on the main body of the aircraft



by the secondary lifting mechanism through  
the secondary tilt enabling joint while the  
primary lifting mechanism and the secondary  
lifting mechanism are maintained in tandem order,  
5 and with controlled lateral tilting of the  
primary lifting mechanism and the secondary lifting  
mechanism able to occur during flight while the  
primary lifting mechanism and the secondary lifting  
mechanism are maintained in tandem order.

10 3. An aircraft with a main body, a primary lifting  
mechanism and a secondary lifting mechanism,  
which main body has a forward end and an aft end,  
with the primary lifting mechanism and the secondary  
lifting mechanism connected to the main body of  
15 the aircraft in tandem order, and with the aircraft  
able to achieve flight by means of upward  
forces exerted on the main body of the aircraft  
by the primary lifting mechanism and the  
secondary lifting mechanism while the primary  
20 lifting mechanism and secondary lifting  
mechanism are connected to the main  
body of the aircraft in tandem order,  
which primary lifting mechanism is a  
turboprop, and which primary lifting mechanism is  
25 attached to the primary tilt enabling joint such

that air can be forced in a downward direction  
by the primary lifting mechanism, and such  
that by forcing air in a downward direction  
the primary lifting mechanism is able to  
5 exert an upward force on the forward end of the  
main body of the aircraft,

and the secondary  
lifting mechanism is a turboprop, which  
secondary lifting mechanism is attached to the  
10 secondary tilt enabling joint such that air can  
be forced in a downward direction by the  
secondary lifting mechanism, and such  
that by forcing air in a downward direction  
the secondary lifting mechanism is able to  
15 exert an upward force on the aft end of the  
main body of the aircraft,

and which primary lifting mechanism is connected  
to the main body of the aircraft by a tilt  
enabling joint such that during flight of the  
20 aircraft the primary lifting mechanism can be  
tilted in a plurality of directions and angles  
relative to the main body of the aircraft, in  
a controlled manner, and such that the primary  
lifting mechanism can be tilted in lateral  
25 directions relative to the main body of the

aircraft during flight of the aircraft,  
and such that a direction of travel of  
the aircraft during flight can be  
altered by altering the lateral  
5 direction or angle of tilt of the  
primary lifting mechanism relative to the  
main body of the aircraft, and which said  
tilt enabling joint is a primary tilt  
enabling joint, with the primary lifting  
10 mechanism able to exert an upward force on  
the forward end of the main body of the  
aircraft through the primary tilt enabling  
joint, and which secondary lifting  
mechanism is connected to the main body of  
15 the aircraft by an additional tilt enabling  
joint, which said additional tilt enabling  
joint is a secondary tilt enabling joint, and  
which said secondary lifting mechanism is  
connected to the main body of the aircraft by  
20 the secondary tilt enabling joint such that  
during flight of the aircraft the secondary  
lifting mechanism can be tilted in a plurality of  
directions and angles relative to the main body  
of the aircraft, in a controlled manner,  
25 and such that the secondary lifting

mechanism can be tilted in lateral  
directions relative to the main body during  
flight of the aircraft, and such that  
a direction of travel of the aircraft during  
5 flight can be altered by altering the  
lateral direction or angle of tilt of the  
secondary lifting mechanism relative to the  
main body, and which secondary tilt enabling  
joint is such that the secondary lifting  
10 mechanism can be tilted in a controlled  
manner in a lateral direction with respect to  
the main body of the aircraft during flight of  
the aircraft that is opposite to a lateral  
direction that the primary lifting mechanism  
15 can be tilted in with respect to the main body  
of the aircraft by means of the primary tilt  
enabling joint during flight of the aircraft,  
and which secondary lifting mechanism is able  
to exert an upward force on the aft end of the  
20 main body of the aircraft through the secondary  
tilt enabling joint, with the primary tilt enabling  
joint and the secondary tilt enabling joint connected  
to the main body of the aircraft, and with the aircraft  
able to achieve flight by means of an upward  
25 force exerted on the main body of the aircraft

by the primary lifting mechanism through the  
primary tilt enabling joint and an upward  
force exerted on the main body of the aircraft  
by the secondary lifting mechanism through  
5 the secondary tilt enabling joint while the  
primary lifting mechanism and the secondary  
lifting mechanism are maintained in tandem order,  
and with controlled lateral tilting of the  
primary lifting mechanism and the secondary lifting  
10 mechanism able to occur during flight while the  
primary lifting mechanism and the secondary lifting  
mechanism are maintained in tandem order.

4. An aircraft with a main body, a primary lifting  
mechanism and a secondary lifting mechanism,  
15 which main body has a forward end and an aft end,  
with the primary lifting mechanism and the secondary  
lifting mechanism connected to the main body of  
the aircraft in tandem order, and with the aircraft  
able to achieve flight by means of upward  
20 forces exerted on the main body of the aircraft  
by the primary lifting mechanism and the  
secondary lifting mechanism while the primary  
lifting mechanism and the secondary lifting  
mechanism are connected to the main in  
25 body of the aircraft in tandem order,

and which primary lifting mechanism comprises  
a rotor, an engine assembly, and a plurality of  
blades, with the said blades connected to the  
rotor, and which said engine assembly is able  
5 to rotate the said rotor, with the blades connected  
to the rotor such that when the rotor is rotated by  
the said engine assembly air can be forced in a  
downward direction by means of the blades rotating  
around the rotor, with the primary lifting mechanism  
10 able to exert an upward force on the forward end of  
the main body of the aircraft by forcing air in a  
downward direction by way of the blades rotating  
around the rotor,

and the secondary lifting mechanism consists of  
15 a jet engine, which jet engine is attached to the  
secondary tilt enabling joint such that the jet  
engine is able to force exhaust gases to travel  
in a downward direction and such that by forcing  
exhaust gases to travel in a downward direction  
20 the jet engine can exert an upward force on the  
aft end of the main body,

and which primary lifting mechanism is connected  
to the main body of the aircraft by a tilt  
enabling joint such that during flight of the  
25 aircraft the primary lifting mechanism can be

tilted in a plurality of directions and angles relative to the main body of the aircraft, in a controlled manner, and such that the primary lifting mechanism can be tilted in lateral

5 directions relative to the main body of the aircraft during flight of the aircraft, and such that a direction of travel of the aircraft during flight can be altered by altering the

10 lateral direction or angle of tilt of the primary lifting mechanism relative to the main body of the aircraft, and which said tilt enabling joint is a primary tilt enabling joint, with the primary lifting

15 mechanism able to exert an upward force on the forward end of the main body of the aircraft through the primary tilt enabling joint, and which secondary lifting mechanism is connected to the main body of

20 the aircraft by an additional tilt enabling joint, which said additional tilt enabling joint is a secondary tilt enabling joint, and which said secondary lifting mechanism is connected to the main body of the aircraft by

25 the secondary tilt enabling joint such that

during flight of the aircraft the secondary  
lifting mechanism can be tilted in a plurality of  
directions and angles relative to the main body  
of the aircraft, in a controlled manner,  
5 and such that the secondary lifting mechanism  
can be tilted in lateral directions relative  
to the main body during flight of the aircraft,  
and such that a direction of travel of the  
aircraft during flight can be altered by altering  
10 the lateral direction or angle of tilt of the  
secondary lifting mechanism relative to the  
main body, and which secondary tilt enabling  
joint is such that the secondary lifting  
mechanism can be tilted in a controlled  
15 manner in a lateral direction with respect to  
the main body of the aircraft during flight of  
the aircraft that is opposite to a lateral  
direction that the primary lifting mechanism  
can be tilted in with respect to the main body  
20 of the aircraft by means of the primary tilt  
enabling joint during flight of the aircraft,  
and which secondary lifting mechanism is able  
to exert an upward force on the aft end of the  
main body of the aircraft through the secondary  
25 tilt enabling joint, with the primary tilt enabling



joint and the secondary tilt enabling joint connected to the main body of the aircraft, and with the aircraft able to achieve flight by means of an upward force exerted on the main body of the aircraft

5 by the primary lifting mechanism through the primary tilt enabling joint and an upward force exerted on the main body of the aircraft by the secondary lifting mechanism through the secondary tilt enabling joint while the

10 primary lifting mechanism and the secondary lifting mechanism are maintained in tandem order, and with controlled lateral tilting of the primary lifting mechanism and the secondary lifting mechanism able to occur during flight while the

15 primary lifting mechanism and the secondary lifting mechanism are maintained in tandem order.

5. The aircraft of claim 4 wherein the said jet engine is a turbojet.

6. The aircraft of claim 4 wherein the said jet

20 engine is a turbofan.

7. An aircraft with a main body, a primary lifting mechanism and a secondary lifting mechanism, which main body has a forward end and an aft end, with the primary lifting mechanism and the secondary

25 lifting mechanism connected to the main body of

the aircraft in tandem order, and with the aircraft  
able to achieve flight by means of upward  
forces exerted on the main body of the aircraft  
by the primary lifting mechanism and the  
5 secondary lifting mechanism while the primary  
lifting mechanism and the secondary lifting  
mechanism are connected to the main  
body of the aircraft in tandem order,

and which primary lifting mechanism comprises a  
10 rotor, an engine assembly, and a plurality of  
blades, with the said blades connected to the  
rotor, and which said engine assembly is able  
to rotate the said rotor, with the blades connected  
to the rotor such that when the rotor is rotated by  
15 the said engine assembly air can be forced in a  
downward direction by means of the blades rotating  
around the rotor, with the primary lifting mechanism  
able to exert an upward force on the forward end of  
the main body of the aircraft by forcing air in a  
20 downward direction by way of the blades rotating  
around the rotor,

and the secondary lifting mechanism consists of  
a plurality of jet engines, which jet engines  
are attached to the secondary tilt enabling joint  
25 such that the jet engines are able to force

exhaust gases to travel in a downward direction  
and such that by forcing exhaust gases to travel  
in a downward direction the jet engines can exert  
an upward force on the aft end of the main body,

5       and which primary lifting mechanism is connected  
to the main body of the aircraft by a tilt  
enabling joint such that during flight of the  
aircraft the primary lifting mechanism can be  
tilted in a plurality of directions and angles  
10       relative to the main body of the aircraft, in  
a controlled manner, and such that the primary  
lifting mechanism can be tilted in lateral  
directions relative to the main body of the  
aircraft during flight of the aircraft,  
15       and such that a direction of travel of the  
aircraft during flight can be altered by  
altering the lateral direction or angle of  
tilt of the primary lifting mechanism relative  
to the main body of the aircraft, and which  
20       said tilt enabling joint is a primary tilt  
enabling joint, with the primary lifting  
mechanism able to exert an upward force on  
the forward end of the main body of the  
aircraft through the primary tilt enabling  
25       joint, and which secondary lifting

mechanism is connected to the main body of  
the aircraft by an additional tilt enabling  
joint, which said additional tilt enabling  
joint is a secondary tilt enabling joint, and  
5 which said secondary lifting mechanism is  
connected to the main body of the aircraft by  
the secondary tilt enabling joint such that  
during flight of the aircraft the secondary  
lifting mechanism can be tilted in a plurality of  
10 directions and angles relative to the main body  
of the aircraft, in a controlled manner,  
and such that the secondary lifting mechanism  
can be tilted in lateral directions relative  
to the main body during flight of the aircraft,  
15 and such that a direction of travel of the  
aircraft during flight can be altered by altering  
the lateral direction or angle of tilt of the  
secondary lifting mechanism relative to the  
main body, and which secondary tilt enabling  
20 joint is such that the secondary lifting  
mechanism can be tilted in a controlled  
manner in a lateral direction with respect to  
the main body of the aircraft during flight of  
the aircraft that is opposite to a lateral  
25 direction that the primary lifting mechanism  
can be tilted in with respect to the main body  
of the aircraft by means of the primary tilt

enabling joint during flight of the aircraft,  
and which secondary lifting mechanism is able  
to exert an upward force on the aft end of the  
main body of the aircraft through the secondary  
5 tilt enabling joint, with the primary tilt enabling  
joint and the secondary tilt enabling joint connected  
to the main body of the aircraft, and with the  
aircraft able to achieve flight by means of an upward  
force exerted on the main body of the aircraft  
10 by the primary lifting mechanism through the  
primary tilt enabling joint and an upward  
force exerted on the main body of the aircraft  
by the secondary lifting mechanism through  
the secondary tilt enabling joint while the  
15 primary lifting mechanism and the secondary  
lifting mechanism are maintained in tandem order,  
and with controlled lateral tilting of the  
primary lifting mechanism and the secondary lifting  
mechanism able to occur during flight while the  
20 primary lifting mechanism and the secondary lifting  
mechanism are maintained in tandem order.

8. The aircraft of claim 7 wherein the said jet  
engines are turbojets.

9. The aircraft of claim 7 wherein the said jet  
25 engines are turbofans.

10. An aircraft with a main body, a primary lifting  
mechanism and a secondary lifting mechanism,  
which main body has a forward end and an aft end,  
with the primary lifting mechanism and secondary  
5 lifting mechanism connected to the main body of  
the aircraft in tandem order, and with the aircraft  
able to achieve flight by means of upward  
forces exerted on the main body of the aircraft  
by the primary lifting mechanism and the  
10 secondary lifting mechanism while the primary  
lifting mechanism and secondary lifting  
mechanism are connected to the main in  
body of the aircraft in tandem order,  
which primary lifting mechanism is a turboprop,  
15 and which primary lifting mechanism is attached  
to the primary tilt enabling joint such that air  
can be forced in a downward direction by the  
primary lifting mechanism, and such  
that by forcing air in a downward direction  
20 the primary lifting mechanism is able to  
exert an upward force on the forward end of the  
main body of the aircraft,  
and the secondary lifting mechanism consists of  
a jet engine, which jet engine is attached to the  
25 secondary tilt enabling joint such that the jet

engine is able to force exhaust gases to travel  
in a downward direction and such that by forcing

exhaust gases to travel in a downward direction  
the jet engine can exert an upward force on the  
5 aft end of the main body,

and which primary lifting mechanism is connected  
to the main body of the aircraft by a tilt  
enabling joint such that during flight of the  
aircraft the primary lifting mechanism can be  
10 tilted in a plurality of directions and angles  
relative to the main body of the aircraft, in  
a controlled manner, and such that the primary  
lifting mechanism can be tilted in lateral  
directions relative to the main body of the  
15 aircraft during flight of the aircraft,  
and such that a direction of travel of the  
aircraft during flight can be altered by  
altering the lateral direction or angle of tilt  
of the primary lifting mechanism relative to  
20 the main body of the aircraft, and which said  
tilt enabling joint is a primary tilt  
enabling joint, with the primary lifting  
mechanism able to exert an upward force on  
the forward end of the main body of the  
25 aircraft through the primary tilt enabling  
joint, and which secondary lifting

mechanism is connected to the main body of  
the aircraft by an additional tilt enabling  
joint, which said additional tilt enabling  
joint is a secondary tilt enabling joint, and  
5 which said secondary lifting mechanism is  
connected to the main body of the aircraft by  
the secondary tilt enabling joint such that  
during flight of the aircraft the secondary  
lifting mechanism can be tilted in a plurality of  
10 directions and angles relative to the main body  
of the aircraft, in a controlled manner,  
and such that the secondary lifting mechanism  
can be tilted in lateral directions relative  
to the main body during flight of the aircraft,  
15 and such that a direction of travel of the aircraft  
during flight can be altered by altering the  
lateral direction or angle of tilt of the  
secondary lifting mechanism relative to the  
main body, and which secondary tilt enabling  
20 joint is such that the secondary lifting  
mechanism can be tilted in a controlled  
manner in a lateral direction with respect to  
the main body of the aircraft during flight of  
the aircraft that is opposite to a lateral  
25 direction that the primary lifting mechanism



can be tilted in with respect to the main body  
of the aircraft by means of the primary tilt  
enabling joint during flight of the aircraft,  
and which secondary lifting mechanism is able  
5 to exert an upward force on the aft end of the  
main body of the aircraft through the secondary  
tilt enabling joint, with the primary tilt enabling  
joint and the secondary tilt enabling joint connected  
to the main body of the aircraft, and with the aircraft  
10 able to achieve flight by means of an upward  
force exerted on the main body of the aircraft  
by the primary lifting mechanism through the  
primary tilt enabling joint and an upward  
force exerted on the main body of the aircraft  
15 by the secondary lifting mechanism through  
the secondary tilt enabling joint while the  
primary lifting mechanism and the secondary  
lifting mechanism are maintained in tandem order,  
and with controlled lateral tilting of the  
20 primary lifting mechanism and the secondary lifting  
mechanism able to occur during flight while the  
primary lifting mechanism and the secondary lifting  
mechanism are maintained in tandem order.

11. The aircraft of claim 9 wherein the said jet  
25 engine is a turbojet.

12. The aircraft of claim 9 wherein the said jet engine is a turbofan.

13. An aircraft with a main body, a primary lifting mechanism and a secondary lifting mechanism,

5 which main body has a forward end and an aft end, with the primary lifting mechanism and the secondary lifting mechanism connected to the main body of the aircraft in tandem order, and with the aircraft able to achieve flight by means of upward

10 forces exerted on the main body of the aircraft by the primary lifting mechanism and the secondary lifting mechanism while the primary lifting mechanism and the secondary lifting mechanism are connected to the main

15 body of the aircraft in tandem order,

which primary lifting mechanism is a turboprop, and which primary lifting mechanism is attached to the primary tilt enabling joint such that air can be forced in a downward direction by the

20 primary lifting mechanism, and such

that by forcing air in a downward direction the primary lifting mechanism is able to exert an upward force on the forward end of the main body of the aircraft,

25 and the secondary lifting mechanism consists of a plurality of jet engines, which jet engines are attached to the secondary tilt enabling joint

such that the jet engines are able to force  
exhaust gases to travel in a downward direction  
and such that by forcing exhaust gases to travel  
in a downward direction the jet engines can exert  
5 an upward force on the aft end of the main body,  
and which primary lifting mechanism is connected  
to the main body of the aircraft by a tilt  
enabling joint such that during flight of the  
aircraft the primary lifting mechanism can be  
10 tilted in a plurality of directions and angles  
relative to the main body of the aircraft, in  
a controlled manner, and such that the primary  
lifting mechanism can be tilted in lateral  
directions relative to the main body of the  
15 aircraft during flight of the aircraft, and such  
that a direction of travel of the aircraft  
during flight can be altered by altering the  
lateral direction or angle of tilt of the  
primary lifting mechanism relative to the  
20 main body of the aircraft, and which said  
tilt enabling joint is a primary tilt  
enabling joint, with the primary lifting  
mechanism able to exert an upward force on  
the forward end of the main body of the  
25 aircraft through the primary tilt enabling  
joint, and which secondary lifting

mechanism is connected to the main body of  
the aircraft by an additional tilt enabling  
joint, which said additional tilt enabling  
joint is a secondary tilt enabling joint, and  
5 which said secondary lifting mechanism is  
connected to the main body of the aircraft by  
the secondary tilt enabling joint such that  
during flight of the aircraft the secondary  
lifting mechanism can be tilted in a plurality of  
10 directions and angles relative to the main body  
of the aircraft, in a controlled manner,  
and such that the secondary lifting mechanism  
can be tilted in lateral directions relative  
to the main body during flight of the aircraft,  
15 and such that a direction of travel of the  
aircraft during flight can be altered by altering  
the lateral direction or angle of tilt of the  
secondary lifting mechanism relative to the  
main body, and which secondary tilt enabling  
20 joint is such that the secondary lifting  
mechanism can be tilted in a controlled  
manner in a lateral direction with respect to  
the main body of the aircraft during flight of  
the aircraft that is opposite to a lateral  
25 direction that the primary lifting mechanism

can be tilted in with respect to the main body  
of the aircraft by means of the primary tilt  
enabling joint during flight of the aircraft,  
and which secondary lifting mechanism is able  
5 to exert an upward force on the aft end of the  
main body of the aircraft through the secondary  
tilt enabling joint, with the primary tilt enabling  
joint and the secondary tilt enabling joint connected  
to the main body of the aircraft, and with the aircraft  
10 able to achieve flight by means of an upward  
force exerted on the main body of the aircraft  
by the primary lifting mechanism through the  
primary tilt enabling joint and an upward  
force exerted on the main body of the aircraft  
15 by the secondary lifting mechanism through  
the secondary tilt enabling joint while the  
primary lifting mechanism and the secondary  
lifting mechanism are maintained in tandem order,  
and with controlled lateral tilting of the  
20 primary lifting mechanism and the secondary lifting  
mechanism able to occur during flight while the  
primary lifting mechanism and the secondary lifting  
mechanism are maintained in tandem order.

14. The aircraft of claim 13 wherein the said jet  
25 engines are turbojets.

15. The aircraft of claim 13 wherein the said jet engines are turbofans.

16. An aircraft with a main body, a primary lifting mechanism and a secondary lifting mechanism,  
5 which main body has a forward end and an aft end, with the primary lifting mechanism and secondary lifting mechanism connected to the main body of the aircraft in tandem order, and with the aircraft able to achieve flight by means of upward  
10 forces exerted on the main body of the aircraft by the primary lifting mechanism and the secondary lifting mechanism while the primary lifting mechanism and secondary lifting mechanism are connected to the main  
15 body of the aircraft in tandem order, and which primary lifting mechanism comprises a rotor, an engine assembly, and a plurality of blades, with the said blades connected to the rotor, and which said engine assembly is able  
20 to rotate the said rotor, with the blades connected to the rotor such that when the rotor is rotated by the said engine assembly air can be forced in a downward direction by means of the blades rotating around the rotor, with the primary lifting mechanism  
25 able to exert an upward force on the forward end of the main body of the aircraft by forcing air in a

downward direction by way of the blades rotating around the rotor,

and the secondary lifting mechanism is a turboprop, which secondary lifting mechanism is attached to the secondary tilt enabling joint such that air can be forced in a downward direction by the secondary lifting mechanism, and such that by forcing air in a downward direction the secondary lifting mechanism is able to exert an upward force on the aft end of the main body of the aircraft,

and which primary lifting mechanism is connected to the main body of the aircraft by a tilt enabling joint such that during flight of the aircraft the primary lifting mechanism can be tilted in a plurality of directions and angles relative to the main body of the aircraft, in a controlled manner, and such that the primary lifting mechanism can be tilted in lateral directions relative to the main body of the aircraft during flight of the aircraft, and such that a direction of travel of the aircraft during flight can be altered by altering the lateral direction or angle of tilt of the primary lifting mechanism relative to the main body of the aircraft, and which said tilt enabling joint is a primary tilt enabling joint, with the primary lifting

mechanism able to exert an upward force on  
the forward end of the main body of the  
aircraft through the primary tilt enabling  
joint, and which secondary lifting  
5 mechanism is connected to the main body of  
the aircraft by an additional tilt enabling  
joint, which said additional tilt enabling  
joint is a secondary tilt enabling joint, and  
which said secondary lifting mechanism is  
10 connected to the main body of the aircraft by  
the secondary tilt enabling joint such that  
during flight of the aircraft the secondary  
lifting mechanism can be tilted in a plurality of  
directions and angles relative to the main body  
15 of the aircraft, in a controlled manner,  
and such that the secondary lifting mechanism  
can be tilted in lateral directions relative  
to the main body during flight of the aircraft,  
and such that a direction of travel of the  
20 aircraft during flight can be altered by altering  
the lateral direction or angle of tilt of the  
secondary lifting mechanism relative to the  
main body, and which secondary tilt enabling  
joint is such that the secondary lifting  
25 mechanism can be tilted in a controlled  
manner in a lateral direction with respect to



the main body of the aircraft during flight of  
the aircraft that is opposite to a lateral  
direction that the primary lifting mechanism  
can be tilted in with respect to the main body  
5 of the aircraft by means of the primary tilt  
enabling joint during flight of the aircraft,  
and which secondary lifting mechanism is able  
to exert an upward force on the aft end of the  
main body of the aircraft through the secondary  
10 tilt enabling joint, with the primary tilt enabling  
joint and the secondary tilt enabling joint connected  
to the main body of the aircraft, and with the aircraft  
able to achieve flight by means of an upward  
force exerted on the main body of the aircraft  
15 by the primary lifting mechanism through the  
primary tilt enabling joint and an upward  
force exerted on the main body of the aircraft  
by the secondary lifting mechanism through  
the secondary tilt enabling joint while the  
20 primary lifting mechanism and the secondary  
lifting mechanism are maintained in tandem order  
and with controlled lateral tilting of the  
primary lifting mechanism and the secondary lifting  
mechanism able to occur during flight while the  
25 primary lifting mechanism and the secondary lifting  
mechanism are maintained in tandem order.

17. An aircraft with a main body, a primary lifting  
mechanism and a secondary lifting mechanism,  
which main body has a forward end and an aft end,  
with the primary lifting mechanism and secondary  
5 lifting mechanism connected to the main body of  
the aircraft in tandem order, and with the aircraft  
able to achieve flight by means of upward  
forces exerted on the main body of the aircraft  
by the primary lifting mechanism and the  
10 secondary lifting mechanism while the primary  
lifting mechanism and secondary lifting  
mechanism are connected to the main in  
body of the aircraft in tandem order,  
which primary lifting mechanism is a turboprop,  
15 and which primary lifting mechanism is attached  
to the primary tilt enabling joint such that air  
can be forced in a downward direction by the  
primary lifting mechanism, and such that by  
forcing air in a downward direction the primary  
20 lifting mechanism is able to exert an upward  
force on the forward end of the main body of  
the aircraft,  
and which secondary lifting mechanism  
comprises a rotor, an engine assembly, and a  
25 plurality of blades, with the blades of the  
secondary lifting mechanism connected to the

rotor of the secondary lifting mechanism, and  
which engine assembly of the secondary lifting  
mechanism is able to rotate the rotor of the  
secondary lifting mechanism, with the blades of  
5 the secondary lifting mechanism connected to  
the rotor of the secondary lifting mechanism  
such that when the rotor of the secondary lifting  
mechanism is rotated by the engine assembly of  
the secondary lifting mechanism air can be  
10 forced in a downward direction by means of the  
blades of the secondary lifting mechanism  
rotating around the rotor of the secondary  
lifting mechanism, with the secondary lifting  
mechanism able to exert an upward force  
15 on the aft end of the main body of the  
aircraft by forcing air in a downward direction  
by way of the blades of the secondary lifting  
mechanism rotating around the rotor of the  
secondary lifting mechanism,  
20 and which primary lifting mechanism is connected  
to the main body of the aircraft by a tilt  
enabling joint such that during flight of the  
aircraft the primary lifting mechanism can be  
tilted in a plurality of directions and angles  
25 relative to the main body of the aircraft, in  
a controlled manner, and such that the primary

lifting mechanism can be tilted in lateral  
directions relative to the main body of the  
aircraft during flight of the aircraft,  
and such that a direction of travel of the  
5 aircraft during flight can be altered by  
altering the lateral direction or angle of tilt  
of the primary lifting mechanism relative to  
the main body of the aircraft, and which said  
tilt enabling joint is a primary tilt  
10 enabling joint, with the primary lifting  
mechanism able to exert an upward force on  
the forward end of the main body of the  
aircraft through the primary tilt enabling  
joint, and which secondary lifting  
15 mechanism is connected to the main body of  
the aircraft by an additional tilt enabling  
joint, which said additional tilt enabling  
joint is a secondary tilt enabling joint, and  
which said secondary lifting mechanism is  
20 connected to the main body of the aircraft by  
the secondary tilt enabling joint such that  
during flight of the aircraft the secondary  
lifting mechanism can be tilted in a plurality of  
directions and angles relative to the main body  
25 of the aircraft, in a controlled manner,  
and such that the secondary lifting mechanism

can be tilted in lateral directions relative to the main body during flight of the aircraft, and such that a direction of travel of the aircraft during flight can be altered by altering the lateral direction or angle of tilt of the secondary lifting mechanism relative to the main body, and which secondary tilt enabling joint is such that the secondary lifting mechanism can be tilted in a controlled manner in a lateral direction with respect to the main body of the aircraft during flight of the aircraft that is opposite to a lateral direction that the primary lifting mechanism can be tilted in with respect to the main body of the aircraft by means of the primary tilt enabling joint during flight of the aircraft, and which secondary lifting mechanism is able to exert an upward force on the aft end of the main body of the aircraft through the secondary tilt enabling joint, with the primary tilt enabling joint and the secondary tilt enabling joint connected to the main body of the aircraft, and with the aircraft able to achieve flight by means of an upward force exerted on the main body of the aircraft by the primary lifting mechanism through the primary tilt enabling joint and an upward

force exerted on the main body of the aircraft  
by the secondary lifting mechanism through  
the secondary tilt enabling joint while the  
primary lifting mechanism and the secondary  
5 lifting mechanism are maintained in tandem order,  
and with controlled lateral tilting of the  
primary lifting mechanism and the secondary lifting  
mechanism able to occur during flight while the  
primary lifting mechanism and the secondary lifting  
10 mechanism are maintained in tandem order.

18. The aircraft of claim 2 wherein  
the engine assembly of the primary lifting  
mechanism comprises a single engine and the  
engine assembly of the secondary lifting  
5 mechanism comprises a single engine.
19. The aircraft of claim 2 wherein  
the engine assembly of the primary lifting  
mechanism comprises a plurality of engines  
and the engine assembly of the secondary lifting  
10 mechanism comprises a single engine.
20. The aircraft of claim 2 wherein  
the engine assembly of the primary lifting  
mechanism comprises a single engine and the  
engine assembly of the secondary lifting  
15 mechanism comprises a plurality of engines.
21. The aircraft of claim 2 wherein  
the engine assembly of the primary lifting  
mechanism comprises a plurality of engines and the  
engine assembly of the secondary lifting  
20 mechanism comprises a plurality of engines.
22. The aircraft of claim 4 wherein  
the engine assembly of the primary lifting  
mechanism comprises a single engine.

23. The aircraft of claim 4 wherein  
the engine assembly of the primary lifting  
mechanism comprises a plurality of engines.
24. The aircraft of claim 7 wherein  
5 the engine assembly of the primary lifting  
mechanism comprises a single engine.
25. The aircraft of claim 7 wherein  
the engine assembly of the primary lifting  
mechanism comprises a plurality of engines.
- 10 26. The aircraft of claim 16 wherein  
the engine assembly of the primary lifting  
mechanism comprises a single engine.
27. The aircraft of claim 16 wherein  
the engine assembly of the primary lifting  
15 mechanism comprises a plurality of engines.
28. The aircraft of claim 17 wherein  
the engine assembly of the secondary lifting  
mechanism comprises a single engine.
29. The aircraft of claim 17 wherein  
20 the engine assembly of the secondary lifting  
mechanism comprises a plurality of engines.



30. The aircraft of any one of claims 1 to 29 wherein  
the primary lifting mechanism is connected to the main body  
by the primary tilt enabling joint such that the primary  
lifting mechanism can be positioned above the main body of  
the aircraft by means of the primary tilt enabling joint  
during flight of the aircraft.

31. The aircraft of any one of claims 1 to 29 wherein  
the primary lifting mechanism is connected to the main body  
by the primary tilt enabling joint such that the primary  
lifting mechanism can be positioned in front of the main  
body of the aircraft by means of the primary tilt enabling  
joint during flight of the aircraft.

32. The aircraft of any one of claims 1 to 29 wherein  
the secondary lifting mechanism is connected to  
the main body by the secondary tilt enabling joint such that  
a part the secondary lifting mechanism can be positioned  
behind the main body of the aircraft by means of the secondary  
tilt enabling joint during flight of the aircraft.

33. The aircraft of any one of claims 1 to 29 wherein  
the secondary lifting mechanism is connected to the main  
body by the secondary tilt enabling joint such that the  
secondary lifting mechanism can be positioned behind the  
main body of the aircraft by means of the secondary tilt  
enabling joint during flight of the aircraft.

34. The aircraft of claim 30 wherein the secondary  
lifting mechanism is connected to the main body by the  
secondary tilt enabling joint such that the secondary lifting  
mechanism can be positioned behind the main body of the aircraft  
5 by means of the secondary tilt enabling joint during flight of  
the aircraft.

35. The aircraft of claim 31 wherein the secondary  
lifting mechanism is connected to the main body by  
the secondary tilt enabling joint such that the  
10 secondary lifting mechanism can be positioned behind  
the main body of the aircraft by means of the secondary  
tilt enabling joint during flight of the aircraft.

36. The aircraft of claim 30 wherein the secondary  
lifting mechanism is connected to the main body by  
15 the secondary tilt enabling joint such that part of the  
secondary lifting mechanism can be positioned behind the  
main body of the aircraft by means of the secondary  
tilt enabling joint during flight of the aircraft.

37. The aircraft of claim 31 wherein  
20 the secondary lifting mechanism is connected to the  
main body by the secondary tilt enabling joint such  
that part of the secondary lifting mechanism can be positioned  
behind the main body of the aircraft by means of the secondary  
tilt enabling joint during flight of the aircraft.

38. The aircraft of any one of claims 1 to 29 wherein  
the secondary lifting mechanism is connected to the  
main body by the secondary tilt enabling joint such  
that part of the secondary lifting mechanism can  
5 be positioned above the main body of the aircraft by means of  
the secondary tilt enabling joint during flight of the aircraft.
39. The aircraft of claim 30 wherein the secondary  
lifting mechanism is connected to the main body by  
the secondary tilt enabling joint such that the  
10 secondary lifting mechanism can be positioned above the aft  
end of the main body of the aircraft by means of the  
secondary tilt enabling joint during flight of the aircraft.
40. The aircraft of claim 31 wherein the secondary  
lifting mechanism is connected to the main body by  
15 the secondary tilt enabling joint such that the  
secondary lifting mechanism can be positioned above  
the aft end of the main body of the aircraft by means of the  
secondary tilt enabling joint during flight of the aircraft.
41. The aircraft of any one of claims 1 to 29  
20 wherein the primary tilt enabling joint is  
connected to the main body by a tilt enabling  
joint, which said tilt enabling joint that  
connects the primary tilt enabling joint to  
the main body is a third tilt enabling joint,

and which said third tilt enabling joint is such that the primary tilt enabling joint can be tilted in a plurality of directions and angles relative to the main body of the aircraft, in a controlled manner, by means of the third  
5 tilt enabling joint without components of the primary tilt enabling joint having to move with respect to one another.

42. The aircraft of any one of claims 1 to 29  
wherein the primary tilt enabling joint has a movement enabling assembly that enables the primary  
10 tilt enabling joint to move and a tilt activating mechanism that can cause and control the movement of the primary tilt enabling joint, and the secondary tilt enabling joint has a movement enabling assembly that allows the secondary tilt enabling joint to  
15 move and a tilt activating mechanism that causes and controls the movement of the secondary tilt enabling joint to occur, which movement enabling assembly of the secondary tilt enabling joint is a secondary movement enabling assembly, and which said tilt  
20 activating mechanism of the secondary tilt enabling joint is a secondary tilt activating mechanism.

43. The aircraft of claim 42 wherein the primary  
tilt enabling joint is connected to the main  
body by a tilt enabling joint, which said tilt  
enabling joint that connects the primary tilt  
5 enabling joint to the main body is a third tilt  
enabling joint, and which said third tilt  
enabling joint is such that the primary tilt  
enabling joint can be tilted in a plurality of  
directions and angles relative to the main body  
10 of the aircraft, in a controlled manner, without  
components of the primary tilt enabling joint  
having to move with respect to one another,  
and which third tilt enabling joint has a  
movement enabling assembly that enables the  
15 third tilt enabling joint to move and a tilt  
activating mechanism that can cause and control  
the movement of the third tilt enabling joint.

44. The aircraft of claim of 42 wherein the  
movement enabling assembly of the primary tilt  
20 enabling joint is a universal joint and the  
tilt activating mechanism of the primary tilt  
enabling joint comprises as plurality of  
hydraulic actuators connected to the universal  
joint of the primary tilt enabling joint and the  
25 movement enabling assembly of the secondary tilt

enabling joint is a universal joint, with the tilt activating mechanism of the secondary tilt enabling joint comprising a plurality of hydraulic actuators connected to the universal joint of the secondary  
5 tilt enabling joint.

45. The aircraft of any one of claims 1 to 29 wherein the secondary lifting mechanism is connected to the the secondary tilt enabling joint by a rotating mechanism such that during flight of the aircraft the secondary lifting  
10 mechanism can be rotated in a controlled manner relative to the secondary tilt enabling joint by means of the rotating mechanism.

46. The aircraft of any one of claims 1 to 29 wherein the secondary tilt enabling joint is connected to the  
15 main body of the aircraft by a rotating mechanism such that during flight of the aircraft the secondary tilt enabling joint can be rotated relative to the main body of the aircraft in a controlled manner by means of the rotating mechanism.

47. The aircraft of claim 46

wherein the primary tilt enabling joint has a  
movement enabling assembly that enables the primary  
tilt enabling joint to move and a tilt activating  
5 mechanism that can cause and control the movement  
of the primary tilt enabling joint, and the secondary  
tilt enabling joint has a movement enabling assembly  
that allows the secondary tilt enabling joint to  
move and a tilt activating mechanism that causes and  
10 controls the movement of the secondary tilt enabling  
joint to occur, which movement enabling assembly of  
the secondary tilt enabling joint is a secondary  
movement enabling assembly, and which said tilt  
activating mechanism of the secondary tilt enabling  
15 joint is a secondary tilt activating mechanism.

48. The aircraft of claim of 47 wherein the

movement enabling assembly of the primary tilt  
enabling joint is a universal joint and the tilt  
activating mechanism of the primary tilt enabling  
20 joint comprises as plurality of hydraulic actuators  
connected to the universal joint of the primary  
tilt enabling joint, and the movement enabling  
assembly of the secondary tilt enabling joint is  
a universal joint, with the tilt activating  
25 mechanism of the secondary tilt enabling joint

comprising a plurality of hydraulic actuators  
connected to the universal joint of the secondary  
tilt enabling joint.

49. The aircraft of claim 47 wherein the primary  
5 tilt enabling joint is connected to the main  
body by a tilt enabling joint, which said tilt  
enabling joint that connects the primary tilt  
enabling joint to the main body is a third tilt  
enabling joint, and which said third tilt  
10 enabling joint is such that the primary tilt  
enabling joint can be tilted in a plurality of  
directions and angles relative to the main body  
of the aircraft, in a controlled manner, without  
components of the primary tilt enabling joint  
15 having to move with respect to one another,  
and which third tilt enabling joint has a  
movement enabling assembly that enables the  
third tilt enabling joint to move and a tilt  
activating mechanism that can cause and control  
20 the movement of the third tilt enabling joint.
50. The aircraft of claim 48 wherein a fin is connected  
to the secondary lifting mechanism such that the  
fin protrudes outward from the secondary lifting mechanism.
51. The aircraft of claim 36  
wherein the primary tilt enabling joint has a  
movement enabling assembly that enables the primary



tilt enabling joint to move and a tilt activating mechanism that can cause and control the movement of the primary tilt enabling joint, and the secondary tilt enabling joint has a movement enabling assembly that allows the secondary tilt enabling joint to move and a tilt activating mechanism that causes and controls the movement of the secondary tilt enabling joint to occur, which movement enabling assembly of the secondary tilt enabling joint is a secondary movement enabling assembly, and which said tilt activating mechanism of the secondary tilt enabling joint is a secondary tilt activating mechanism, and which primary tilt enabling joint is connected to the main body by a tilt enabling joint, which said tilt enabling joint that connects the primary tilt enabling joint to the main body is a third tilt enabling joint, and which said third tilt enabling joint is such that the primary tilt enabling joint can be tilted in a plurality of directions and angles, in a controlled manner, and wherein the third tilt enabling joint has a movement enabling assembly that enables the third tilt enabling joint to move and a tilt activating mechanism that can cause and control the movement of the third tilt enabling joint.

52. The aircraft of claim 51 wherein the secondary  
tilt enabling joint is connected to the main body  
of the aircraft by a rotating mechanism such that  
during flight of the aircraft the secondary tilt  
5 enabling joint can be rotated relative to the main  
body of the aircraft in a controlled manner by means  
of the rotating mechanism.

53. The aircraft of claim of 42 wherein the  
10 movement enabling assembly of the primary tilt  
enabling joint is a plurality of hinges  
transversely connected to one another and the tilt  
activating mechanism of the primary tilt enabling  
joint comprises a plurality of hydraulic actuators  
15 connected to the movement enabling assembly of  
the primary tilt enabling joint, and the  
movement enabling assembly of the secondary tilt  
enabling joint is a universal joint, with the tilt  
activating mechanism of the secondary tilt enabling  
20 joint comprising a plurality of hydraulic actuators  
connected to the universal joint of the secondary  
tilt enabling joint.

54. The aircraft of claim of 42 wherein the  
movement enabling assembly of the primary tilt  
enabling joint is a plurality of hinges  
transversely connected to one another and the tilt  
5 activating mechanism of the primary tilt enabling  
joint comprises as plurality of hydraulic actuators  
connected to the movement enabling assembly of  
the primary tilt enabling joint, and the  
movement enabling assembly of the secondary tilt  
10 enabling joint is a plurality of hinges  
transversely connected to one another with the tilt  
activating mechanism of the secondary tilt enabling  
joint comprising a plurality of hydraulic actuators  
connected to the movement enabling assembly of  
15 the secondary tilt enabling joint.

55. The aircraft of claim of 42 wherein the  
movement enabling assembly of the primary tilt  
enabling joint is a universal joint and the tilt  
activating mechanism of the primary tilt enabling  
20 joint comprises as plurality of hydraulic actuators  
connected to the universal joint of the primary  
tilt enabling joint and the movement enabling  
assembly of the secondary tilt enabling joint is a  
plurality of hinges transversely connected to one  
25 another with the tilt activating mechanism of the

secondary tilt enabling joint comprising a plurality of hydraulic actuators connected to the movement enabling assembly of the secondary tilt enabling joint.

56. The aircraft of any one of claims 1 to 29 wherein the primary  
5 lifting mechanism is connected to the main body of the aircraft by means of the primary tilt enabling joint such that the primary lifting mechanism can be tilted in a forward direction and a rearward direction relative to the main body of the aircraft, in a controlled manner, by means  
10 of the primary tilt enabling joint and the secondary lifting mechanism is connected to the main body of the aircraft by means of the secondary tilt enabling joint such that the secondary lifting mechanism can be tilted in a forward and rearward  
15 direction relative to the main body of the aircraft, in a controlled manner, by means of the secondary tilt enabling joint.

57. The aircraft of claim 36 wherein the primary lifting  
mechanism is connected to the main body of the aircraft  
by means of the primary tilt enabling joint such that  
20 the primary lifting mechanism can be tilted in a forward direction and a rearward direction relative

to the main body of the aircraft, in a controlled manner, by means of the primary tilt enabling joint, and the secondary lifting mechanism is connected to the main body of the aircraft by means of the secondary tilt enabling joint such that the secondary lifting mechanism can be tilted in a forward and rearward direction relative to the main body of the aircraft, in a controlled manner, by means of the secondary tilt enabling joint.

58. The aircraft of claim 57 wherein the primary tilt enabling joint comprises a plurality of movement enabling assemblies that enable the primary tilt enabling joint to have a tilt motion and a plurality of tilt activating mechanisms that can cause and control the movement of the primary tilt enabling joint, and the secondary tilt enabling joint comprises a plurality of movement enabling assemblies that allow the secondary tilt enabling joint to move and a plurality of tilt activating mechanism that can cause and control the movement of the secondary tilt enabling joint.

59. The aircraft of any one of claims 1 to 29 wherein the primary lifting mechanism is connected to

the main body by the primary tilt enabling joint  
such that the whole of the primary lifting mechanism  
can be placed in position that is in front of and  
above the main body of the aircraft by means of the  
5 primary tilt enabling joint during flight of the aircraft.

60. The aircraft of any one of claims 1 to 29 wherein the secondary  
lifting mechanism is connected to the main body by the secondary  
tilt enabling joint such that the whole of the secondary  
lifting mechanism can be placed in a position that is  
10 above and behind the main body of the aircraft by means of  
the secondary tilt enabling joint during flight of the aircraft.

61. The aircraft of claim 59 wherein the secondary lifting  
mechanism is connected to the main body by the secondary tilt  
enabling joint such that the whole of the secondary lifting  
15 mechanism can be placed in a position that is above and  
behind the main body of the aircraft by means of the  
secondary tilt enabling joint during flight of the aircraft.

62. The aircraft of any one of claims 1 to 29 wherein  
the primary lifting mechanism is connected to  
20 the main body by the primary tilt enabling joint such that a  
part of the primary lifting mechanism can be positioned in  
front of the main body of the aircraft by means of the  
primary tilt enabling joint during flight of the aircraft.

63. The aircraft of claim 62 wherein the secondary lifting  
mechanism is connected to the main body by the secondary tilt  
enabling joint such that the secondary lifting mechanism can  
be positioned behind the main body of the aircraft by means of  
5 the secondary tilt enabling joint during flight of the aircraft.

64. The aircraft of claim 62 wherein the secondary lifting  
mechanism is connected to the main body by the secondary tilt  
enabling joint such that part of the secondary lifting  
mechanism can be positioned behind the main body of the  
10 aircraft by means of the secondary tilt enabling joint during  
flight of the aircraft.

65. The aircraft of claim 62 wherein the secondary lifting  
mechanism is connected to the main body by the secondary tilt  
enabling joint such that the secondary lifting mechanism can  
15 be positioned above the aft end of the main body of the  
aircraft by means of the secondary tilt enabling joint during  
flight of the aircraft.

66. The aircraft of claim 59 wherein by means of the primary  
tilt enabling joint the primary lifting mechanism can be  
20 placed in a position such that only a of part of the primary  
lifting mechanism is in front of the main body of the aircraft  
by means of the primary tilt enabling joint during flight of  
the aircraft.

67. The aircraft of claim 60 wherein by means of the secondary tilt enabling joint the secondary lifting mechanism can be placed in a position such that only a part of the secondary lifting mechanism is in behind of the main body of the aircraft  
5 by means of the secondary tilt enabling joint during flight of the aircraft.

68. The aircraft of claim 46 wherein the secondary lifting mechanism is connected to the main body by the secondary tilt enabling joint such that the whole of the secondary  
10 lifting mechanism can be placed in a position that is above and behind the main body of the aircraft by means of the secondary tilt enabling joint during flight of the aircraft.

69. The aircraft of claim 68 wherein by means of the secondary tilt enabling joint the secondary lifting mechanism can be  
15 placed in a position such that no part of the secondary lifting mechanism is in behind of the main body of the aircraft.

70. The aircraft of claim 69 wherein the primary lifting mechanism is connected to the main body by the primary tilt enabling joint  
20 such that by means of the primary tilt enabling joint the whole of the primary lifting mechanism can be placed in position that is in front of and above the main body of the aircraft during flight of the aircraft.



71. The aircraft of claim 70 wherein by means of the primary tilt enabling joint the primary lifting mechanism can be placed in a position such that only a part of the primary lifting mechanism is in front of the main body of the aircraft.

5 72. The aircraft of claim 71 wherein the primary lifting mechanism is connected to the main body of the aircraft by means of the primary tilt enabling joint such that the primary lifting mechanism can be tilted in a forward direction and a rearward direction relative to the  
10 main body of the aircraft, in a controlled manner, by means of the primary tilt enabling joint and the secondary lifting mechanism is connected to the main body of the aircraft by means of the secondary tilt enabling joint such that the secondary lifting  
15 mechanism can be tilted in a forward and rearward direction relative to the main body of the aircraft, in a controlled manner, by means of the secondary tilt enabling joint.

73. The aircraft of claim 72 wherein a fin is connected  
20 to the secondary lifting mechanism such that the fin protrudes outward from the secondary lifting mechanism.

73. The aircraft of claim 45 wherein  
the secondary tilt enabling joint is such that  
the secondary lifting mechanism is able to be tilted  
in a forward direction, a rearward direction, and in  
5 lateral directions with respect to the main body of the  
aircraft by means of the secondary tilt enabling joint.

73. The aircraft of claim 46 wherein  
the secondary tilt enabling joint is such that  
the secondary lifting mechanism is able to be tilted  
10 in a forward direction, a rearward direction, and in  
lateral directions with respect to the main body of the  
aircraft by means of the secondary tilt enabling joint.

73. The aircraft of claim 52 wherein  
the secondary tilt enabling joint is such that  
15 the secondary lifting mechanism is able to be tilted  
in a forward direction, a rearward direction, and in  
lateral directions with respect to the main body of the  
aircraft by means of the secondary tilt enabling joint.

74. The aircraft of any one of claims 1 to 29 wherein  
20 the secondary lifting mechanism is connected to the  
secondary tilt enabling joint by a rotating mechanism such  
that during flight of the aircraft the secondary lifting  
mechanism can be rotated in a controlled manner relative to  
the secondary tilt enabling joint by means of the rotating

mechanism,

and the primary lifting mechanism and the secondary lifting mechanism are connected to the main body of the aircraft such that the primary lifting mechanism is further forward with respect to the main body of the aircraft than is the position of the secondary lifting mechanism with respect to the main body of the aircraft.

75. The aircraft of claim 74 wherein the secondary tilt enabling joint is such that the secondary lifting mechanism is able to be tilted in a forward direction, a rearward direction, and in lateral directions with respect to the main body of the aircraft by means of the secondary tilt enabling joint.

76. The aircraft of claim 41 wherein the primary tilt enabling joint is such that the primary lifting mechanism is able to be tilted in a forward direction, a rearward direction, and in lateral directions with respect to the main body of the aircraft by means of the primary tilt enabling joint.

77. The aircraft of claim 43 wherein the primary tilt enabling joint is such that the primary lifting mechanism is able to be tilted in a forward direction, a rearward direction, and in lateral directions with respect to the main body of the aircraft by means of the primary tilt

enabling joint,

and the primary tilt enabling joint is  
connected to the main body by an additional tilt enabling  
joint, which said additional tilt enabling joint that connects  
5 the primary tilt enabling joint to the main body is a third  
tilt enabling joint, and which said third tilt enabling joint  
is such that the primary tilt enabling joint can be tilted in  
a plurality of directions and angles relative to the main  
body of the aircraft, in a controlled manner, and which third  
10 tilt enabling joint has a movement enabling assembly that  
enables the third tilt enabling joint to move and a tilt  
activating mechanism that can cause and control the movement  
of the third tilt enabling joint.

78. The aircraft of claim 45 wherein

15 the primary tilt enabling joint is such that the primary  
lifting mechanism is able to be tilted in a forward direction,  
a rearward direction, and in lateral directions with respect  
to the main body of the aircraft by means of the primary tilt  
enabling joint,

20 and the primary tilt enabling joint is  
connected to the main body by a tilt enabling  
joint, which said tilt enabling joint that connects  
the primary tilt enabling joint to the main body is a third  
tilt enabling joint, and which said third tilt enabling joint

is such that the primary tilt enabling joint can be tilted in a plurality of directions and angles relative to the main body of the aircraft, in a controlled manner, and which third tilt enabling joint has a movement enabling assembly that  
5 enables the third tilt enabling joint to move and a tilt activating mechanism that can cause and control the movement of the third tilt enabling joint,

and the secondary tilt enabling joint is such that the secondary lifting mechanism is able to be tilted  
10 in a forward direction, a rearward direction, and in lateral directions with respect to the main body of the aircraft by means of the secondary tilt enabling joint.

79. The aircraft of claim 46 wherein the primary tilt enabling joint is such that the primary  
15 lifting mechanism is able to be tilted in a forward direction, a rearward direction, and in lateral directions with respect to the main body of the aircraft by means of the primary tilt enabling joint,

and the primary  
20 tilt enabling joint is connected to the main body by an tilt enabling joint, which said tilt enabling joint that connects the primary tilt enabling joint to the main body is a third tilt enabling joint, and which said third tilt enabling joint is such that the primary tilt

enabling joint can be tilted in a plurality of directions and angles relative to the main body of the aircraft, in a controlled manner, and which third tilt enabling joint has a movement enabling assembly that enables the third tilt enabling joint to move and a tilt activating mechanism that can cause and control the movement of the third tilt enabling joint,

and the secondary tilt enabling joint is such that the secondary lifting mechanism is able to be tilted in a forward direction, a rearward direction, and in lateral directions with respect to the main body of the aircraft by means of the secondary tilt enabling joint.

80. The aircraft of claim 76 wherein

the primary lifting mechanism and the secondary lifting mechanism are connected to the main body of the aircraft such that the primary lifting mechanism is further forward with respect to the main body of the aircraft than is the position of the secondary lifting mechanism with respect to the main body of the aircraft.

81. The aircraft of claim 77 wherein

the primary lifting mechanism and the secondary lifting mechanism are connected to the main body of the aircraft such that the primary lifting mechanism is further forward with respect to the main body of the aircraft than is the

position of the secondary lifting mechanism with respect to the main body of the aircraft.

82. The aircraft of claim 78 wherein

the primary lifting mechanism and the secondary lifting  
5 mechanism are connected to the main body of the aircraft  
such that the primary lifting mechanism is further forward  
with respect to the main body of the aircraft than is the  
position of the secondary lifting mechanism with respect to  
the main body of the aircraft.

10 83. The aircraft of claim 79 wherein

the primary lifting mechanism and the secondary lifting  
mechanism are connected to the main body of the aircraft  
such that the primary lifting mechanism is further forward  
with respect to the main body of the aircraft than is the  
15 position of the secondary lifting mechanism with respect to  
the main body of the aircraft.

84. The aircraft of claim 41 wherein

the primary lifting mechanism and the secondary lifting  
mechanism are connected to the main body of the aircraft  
20 such that the primary lifting mechanism is further forward  
with respect to the main body of the aircraft than is the  
position of the secondary lifting mechanism with respect  
to the main body of the aircraft.

85. The aircraft of claim 45 wherein

the primary lifting mechanism and the secondary lifting mechanism are connected to the main body of the aircraft such that the primary lifting mechanism is further forward with respect to the main body of the aircraft than is the position of the secondary lifting mechanism with respect to the main body of the aircraft.

86, 85. The aircraft of any one of claims 1 to 29 wherein the primary lifting mechanism and the secondary lifting mechanism are connected to the main body of the aircraft such that the primary lifting mechanism is further forward with respect to the main body of the aircraft than is the position of the secondary lifting mechanism with respect to the main body of the aircraft.